



UNITED STATES PATENT AND TRADEMARK OFFICE

7

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,126	07/09/2004	Stephen Ray Foor	BA9297USPCT	5564
<div>7590 12/12/2007 David E Heiser E I du Pont de Nemours & Company Legal Patents Wilmington, DE 19898</div>			<div>EXAMINER SASAN, ARADHANA</div> <div>ART UNIT PAPER NUMBER 1615</div> <div>MAIL DATE DELIVERY MODE 12/12/2007 PAPER</div>	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,126	FOOR ET AL.	
	Examiner	Art Unit	
	Aradhana Sasan	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4-7, 9, 11, 17-28 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7, 9, 11, 17-20, 24, 25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

1. The remarks and amendments filed on 09/19/2007 are acknowledged.
2. Claims 3, 8, 10, and 12-16 were cancelled.
3. New claims 23-28 were added.
4. Claims 1, 6, 17 and 18 were amended.
5. Claims 1-2, 4-7, 9, 11, 17-20, 24-25 and 27-28 were amended and are included in the prosecution.

Response to Arguments

Restriction requirement

Applicants' objection to the restriction requirement and request for reconsideration of the restriction requirement, see Page 8, filed 09/19/2007, with respect to claim 7 has been fully considered but is not persuasive. As stated in the office action dated 5/30/07, in claim 7, although at least one compound selected from (b2) is included in the composition, in addition, at least one compound selected from (b1), (b3), (b6), (b7), (b8) or (b9) is also included. Selecting at least one compound from (b1), (b3), (b6), (b7), (b8) or (b9) in addition to (b2) constitutes separate technical features and the search involved for each of these compounds would be different.

6. Applicants' submission that amended claim 18 and new claim 24 should be included in Group II (see Page 8, filed 09/19/2007) has been fully considered and is found persuasive. Amended claim 18, dependent claims 19-20, and new claims 24-25 and 27-28 will be included in Group II of the restriction requirement. Claims 21-23 and

Art Unit: 1615

26 will not be included in Group II because the compositions disclosed in these claims further comprise a compound. Therefore, the restriction requirement is still deemed proper and claims 1-2, 4-7, 9, 11, 17-20, 24-25 and 27-28 will be included in Group II and in the prosecution.

Rejection of claims 1, 2, 4-11, and 17 under 35 USC § 103(a)

7. Applicant's arguments, see Page 9, filed 09/19/2007, with respect to the rejection of claims 1, 2, 4-11, and 17 under 35 USC § 103(a) as being unpatentable over Moloney et al. (US 6,503,933) in view of Berezna et al. (US 6,066,638), and further in view of Jordan et al. (Pesticide science 55:105-118 (1999)) have been fully considered but are not persuasive.

Applicant argues that Berezna does not suggest combining famoxadone, or any other (b2) compound, with a component (a) compound; and that the disclosure of Berezna is limited to a discussion of combinations including certain fungicidal fused-ring pyrimidinones that are not structurally related to component (a) compounds. Applicants state that Moloney does not specifically disclose famoxadone or any other (b2) compound or suggest that (b2) compounds should be combined and Moloney does not disclose or fairly suggest that combinations with (b2) compounds will provide advantageous results as disclosed by applicants.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use 2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide, which is component (a) of Formula I, as disclosed by Moloney, and combine it with an "agricultural protectant" famoxadone (5-methyl-5-(4-

Art Unit: 1615

phenoxyphenyl)-3-phenylamino-2, 4-oxazolidinedione), which is component (b2) of Formula I, as taught by Bereznak and produce the instant invention. Since all the claimed elements are found in Moloney and Bereznak and Jordon provides the teaching that famoxadone is an inhibitor of mitochondrial electron transport, specifically inhibiting the function of the enzyme ubiquinol:cytochrome c oxidoreductase (cytochrome bc₁), one skilled in the art could have combined the elements and the combination would have yielded predictable results. See *KSR International Co. v. Teleflex Inc.*, 550 U.S. - , 82 USPQ2d 1385 (2007).

In response to applicant's argument that Bereznak does not suggest combining famoxadone, or any other (b2) compound, with a component (a) compound; the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is provided by Moloney who teaches that compounds with fungicidal properties can be included in the composition. Bereznak also teaches the advantage of combining compounds with fungicidal properties as having "an even broader spectrum of agricultural protection".

In response to applicants' illustration of Table A that shows synergy with certain combinations of component (a) compounds and (b2) compounds, since all the claimed elements (components (a) and (b2)) are found in Moloney and Bereznak, it is apparent

Art Unit: 1615

that one of ordinary skill in the art would have had a reasonable expectation of success in combining the teachings of the references and producing the claimed invention. The demonstration of synergy between components (a) and (b2) in terms of fungicidal effectiveness would have been obvious to one of ordinary skill in the art given the benefit of better control of plant diseases caused by fungal pathogens, as taught by Bereznak (Col. 69, lines 61-63). Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Therefore, the rejection of 5/30/07 is maintained.

Provisional rejection of claims 1 and 4-11 under obviousness-type double patenting

8. Applicant's arguments, see Page 10, filed 09/19/2007, with respect to the provisional rejection of claims 1, and 4-11 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6-9, 11-14 of copending Application No. 10/501,122 and over claims 1, 6-9, 11-14 or copending Application No. 10/501,853 have been fully considered but are not persuasive.

Applicants argue that the office action provides no basis for the suggestion that the groups other than the so-called "core" included in the respective compounds cannot be a basis of patentable distinction. This is not found persuasive because since the core of the compound of the instant application is the same as the compounds in copending applications, it would be obvious to a person having ordinary skill in the art that the fungicidal activity of these compounds resides in the core structure. The substituents

Art Unit: 1615

will not affect the fungicidal activity of these compounds. One with ordinary skill in the art can use a pyridinyl ring as the substituents for B in formula I of the instant application.

Therefore, the rejection of 5/30/07 is maintained.

MAINTAINED REJECTIONS:

The following is a list of maintained rejections:

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 4-7, 9, 11, 17, amended claim 18, and 19-20, 24-25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moloney et al. (US 6,503,933) in view of Bereznak et al. (US 6,066,638), and further in view of Jordan et al. (Pesticide science 55:105-118 (1999)).

The claimed invention is a composition for controlling plant diseases caused by fungal plant pathogens comprising (a) at least one compound of formula I of claim 1, N-oxides and agriculturally suitable salts thereof and (b) a compound acting at the bc_1 complex of the fungal mitochondrial respiratory electron transfer site.

Moloney discloses compounds that are phytopathogenic fungicides with the same structure as formula I of the instant application. Formula I of Moloney has substituents that are included in part (a) of Formula I of the instant application (Col. 1,

Art Unit: 1615

lines 7-50). Component (a) of Formula 1, as disclosed in instant claim 17, is 2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide, is disclosed by Moloney in Col. 9, Table 1, Compound 21.

Moloney does not expressly teach a compound acting at the bc_1 complex of the fungal mitochondrial respiratory electron transfer site.

Bereznak teaches fungicidal pyrimidinones. An example of an "agricultural protectant" is 5-methyl-5-(4-phenoxyphenyl)-3-phenylamino-2, 4-oxazolidinedione (Col. 69, lines 61-63). This compound can be mixed with fungicidal pyrimidinones "for better control of plant diseases caused by fungal plant pathogens" (Col. 69, lines 51-52). This compound is famoxadone. As Jordan teaches, famoxadone is an inhibitor of "mitochondrial electron transport, specifically inhibiting the function of the enzyme ubiquinol:cytochrome c oxidoreductase (cytochrome bc_1) (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use 2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide, as disclosed by Moloney, and combine it with an "agricultural protectant" famoxadone (5-methyl-5-(4-phenoxyphenyl)-3-phenylamino-2, 4-oxazolidinedione) as taught by Bereznak and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because the composition of formula I(a) as taught by Moloney, can include additional active ingredients such as compounds with fungicidal properties (Moloney, Col. 3, lines 29-32). Furthermore, Bereznak also teaches the advantage of combining compounds with

Art Unit: 1615

fungicidal properties as having “an even broader spectrum of agricultural protection” (Col. 68, lines 58-64).

Regarding instant claims 1, 2, and 17-18, the composition comprising components (a) and (b) of formula I would have been obvious to one with ordinary skill in the art over Moloney in view of Bereznak. As stated above, Moloney teaches component (a) of formula I, and Bereznak teaches component (b) of formula I.

Regarding instant claims 4-7, 19-20, component (b2) of formula I (famoxadone) would have been obvious to one with ordinary skill in the art given the famoxadone (5-methyl-5-(4-phenoxyphenyl)-3-phenylamino-2, 4-oxazolidinedione) teaching of Bereznak. The weight ratio of component (b2) to component (a) would have been obvious to one with ordinary skill in the art because during the process of routine experimentation, titration of various levels of components would be carried out in order to optimize the efficacy of the composition in controlling fungal pathogens in plants.

Regarding instant claims 9, 11 and new claims 27-28, the method for controlling plant diseases by applying a fungicidally effective amount of the composition would have been obvious to one with ordinary skill in the art. Moreover, Bereznak teaches applying effective amounts of the fungicidal composition to plants or portions of plants to control plant disease (Col. 70, lines 41-47). Since broad-spectrum agricultural protection is possible by combining fungicidal components in a particular composition, one with ordinary skill in the art would formulate the composition to control specific fungal pathogens. Bereznak includes *Plasmopara viticola* and *Phytophthora infestans* as fungal pathogens (Col. 68, lines 37-38).

Art Unit: 1615

Regarding instant claims 24-25 and 27-28, the limitation of a "synergistic fungicidally effective amount" would have been obvious to one of ordinary skill in the art given the composition of formula I(a) as taught by Moloney, which can include additional active ingredients such as compounds with fungicidal properties (Moloney, Col. 3, lines 29-32). Furthermore, Bereznak also teaches the advantage of combining compounds with fungicidal properties as having "an even broader spectrum of agricultural protection" (Col. 68, lines 58-64).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

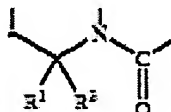
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, and 4-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6-9, 11-14 of

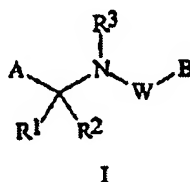
Art Unit: 1615

copending Application No. 10/501,122 ('122 hereinafter) and over claims 1, 6-9, 11-14 or copending Application No. 10/501,853 ('853 hereinafter). Although the conflicting claims are not identical, they are not patentably distinct from each other.

The core of formula I from '122 and '853 is:



Formula I of the instant application is:



Since the core of the compound is the same as that of the compounds in copending applications, it would be obvious to a person having ordinary skill in the art that the fungicidal activity of these compounds resides in the core structure. The substituents will not affect the fungicidal activity of these compounds. One with ordinary skill in the art can use a pyridinyl ring as the substituents for B in formula I of the instant application.

Since the instant application claims a composition comprising a compound of Formula I, it is obvious over the claims of '122 and '853, and they are not patentably distinct over each other.

Art Unit: 1615

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented

Conclusion

13. No claims are allowed.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aradhana Sasan whose telephone number is (571) 272-9022. The examiner can normally be reached Monday to Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MICHAEL P. WOODWARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600